

Work Order ID 163476

Tuesday, June 27, 2017 1:17:22 PM

163476

Page 1

Item ID: D350-836-019 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Crosstube Antenna Mount AS350 / AS355
 Start Date: 6/27/2017 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 6/29/2017 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: DAS 21 Date: **JUN 28 2017** Tooling: _____ Date: _____ Run Start ***NR1***
 QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100 *100* DC	Document Control								
GA202-1	A								
	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile and create labels as per PPP D350-836-019 CH001								
110 *110* Packaging Packaging	Pick Kit	0.00							
	Memo	0.00							
120 *120* QC	QC4- 100% Inspect kits for completeness	0.00							
Quality Control	Memo	0.06							

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 163476

Tuesday, June 27, 2017 1:17:22 PM

163476

Page 2

Item ID: D350-836-019

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Crosstube Antenna Mount AS350 / AS355

Start Date: 6/27/2017 Start Qty: 2.00 ***2***

Cust Item ID:

Required Date: 6/29/2017 Req'd Qty: 2.00 ***2***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>Eg122</u>	0.00							
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D350-836-019								
	Location: _____								
	PPP Rev: _____								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.20							
Quality Control									

DAS
28
9-89

JUL 21 2017

17h/2498

JUL 21 2017

DQA: _____ Date: _____

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Work Order update only ☐

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Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
3000								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

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Page 1

163476

D350-836-019

Required Date: 6/29/2017

Required Qty: 2.00

Comments: IPP REV:A 13.07.18 AS PER ECN13-561 DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4853-1 *D4853-1* Top Bracket		Manufactured	No			110	Each	0.0000	1	2			
D4854-1 *D4854-1* Lower Bracket		Manufactured	No			110	Each	5.0000	1	2			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				st526		5							
					161996	5							
D4855-1 *D4855-1* Antenna Bracket		Manufactured	No			110	Each	4.0000	1	2			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				st526		4							
					158888	4							
D2732-030 *D2732-030* Rubber Cushion - 3"		Manufactured	No			110	Each	224.0000	2	4			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FG		100							
					158347	100							
				ST410		124							
					162073	124							

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
10/1/2011 10/1/2011 10/1/2011				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
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OTHER : _____																					

Picklist Print

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Work Order ID: 163476

163476

Parent Item: D350-836-019

D350-836-019

Parent Item Name: Crosstube Antenna Mount AS350 / AS355

Start Date: 6/27/2017

Required Date: 6/29/2017

Start Qty: 2.00

Required Qty: 2.00

AN4-16A Purchased No

110 Each 195.0000 2 4

AN4-16A

Bolt

**

DAS
27
9-89

Location

Loc Qty

Loc Code

FG 5
121541 5
ST343 190
M137507 190

JUL 20 2017

DAS
6
9-89

M138040

4

AN4-11A Purchased No

110 Each 139.0000 2 4

AN4-11A

BOLT

**

DAS
27
9-89

Location

Loc Qty

Loc Code

FG 20
120731 20
ST344 119
M137495 119

JUL 20 2017

DAS
6
9-89

4

NAS1149D0432J Purchased No

110 Each 1,043.000 8 16

NAS1149D0432J

WASHER

**

DAS
27
9-89

Location

Loc Qty

Loc Code

GA 24
m131026 24
ST264 1019
m134676 30
m137459 989

JUL 20 2017

DAS
6
9-89

16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Picklist Print

Tuesday, June 27, 2017 1:17:24 PM

Page 3

Work Order ID: 163476

163476

Parent Item: D350-836-019

D350-836-019

Parent Item Name: Crosstube Antenna Mount AS350 / AS355

Start Date: 6/27/2017

Required Date: 6/29/2017

Start Qty: 2.00

Required Qty: 2.00

MS21042L4

Purchased

No

110

Each

2,061.000

4

8

MS21042L4

Nut

**

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001	10	
m133363	10	
GA	51	
m135058	51	
OVER007	1400	
m137402	400	
<u>m137680</u>	1000	
ST303	600	
m137544	600	

JUL 20 2017

DA:
6
9-8

8

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Shop Packet Print

Page 3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
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Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

5. PARTS LIST

Qty -019	Qty -111	Part Number	Description
X		D350-836-019	CROSSTUBE ANTENNA MOUNT KIT AS350/355 (P162-350)
	X	D206-836-111	CROSSTUBE ANTENNA MOUNT KIT UNIVERSAL (P162-U)
1	1	D4853-1	TOP BRACKET (REPLACES P/N G13013-1)
	1	D4853-3	TOP BRACKET (REPLACES P/N G13013-5)
	1	D4853-5	TOP BRACKET (REPLACES P/N G13013-7)
	1	D4853-7	TOP BRACKET (REPLACES P/N G13013-9)
1	1	D4854-1	LOWER BRACKET (REPLACES P/N G13013-2)
	1	D4854-3	LOWER BRACKET (REPLACES P/N G13013-6)
	1	D4854-5	LOWER BRACKET (REPLACES P/N G13013-8)
	1	D4854-7	LOWER BRACKET (REPLACES P/N G13013-10)
1	1	D4855-1	ANTENNA BRACKET (REPLACES P/N G13013-3)
2	2	D2732-030	RUBBER CUSHION (REPLACES P/N G13013-4)
2	2	AN4-16A	BOLT
2	2	AN4-11A	BOLT
8	8	NAS1149D0432J	WASHER
4	4	MS21042L4	LOCKNUT

Work Order ID 163476

163476

Page 1

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Item ID: D350-836-019 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Crosstube Antenna Mount AS350 / AS355
 Start Date: 6/27/2017 Start Qty: 2.00 *2* Cust Item ID:
 Required Date: 6/29/2017 Req'd Qty: 2.00 *2* Customer:
 Reference:

Approvals: Process Plan: _____ Date: JUN 28 2017 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start *NR1*
 Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
GA202-1	A								
100	Document Control	0.00							
100									
DC	Memo	0.00							
Doc. Control -USB or Paperwork	Photocopy bluefile and create labels as per PPP D350-836-019 CH001								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.06							
Quality Control									

JUL 13 2017

JUL 04 8 2017

DAS
5
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(2)

JUL 21 2017

Supplemental Type Certificate

Number SR02253SE

This certificate, issued to

Dart Aerospace USA, Inc.
190 S. Danebo Ave.
Eugene, OR 97402

*certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part * of the * Regulations.*

Original Product—Type Certificate Number:

* See attached Federal Aviation Administration (FAA)

Make:

Approved Model List (AML) SR02253SE for a list of

Model:

approved models and applicable airworthiness regulations

Description of the Type Design Change: Fabrication of Geneva Aviation P162 Cross-Tube Antenna Mounts in accordance with Master Drawing List GA202, Revision "--", dated September 30, 2011, or later FAA-approved revision; and installation and maintenance of this assembly in accordance with the documents shown on AML SR02253SE.

This supplemental type certificate does not include approval or installation of any antenna.

Limitations and Conditions: Approval of this change in type design applies to the rotorcraft listed in AML SR02253SE only. This approval should not be extended to other rotorcraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and any of the other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that helicopter. A copy of this certificate, AML SR02253SE, and the appropriate Instructions for Continued Airworthiness as listed on AML SR02253SE, must be maintained as part of the permanent records of the modified rotorcraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: September 30, 2012

Date reissued: January 16, 2013; October 28, 2015

Date of issuance: December 21, 2012

Date amended:



By direction of the Administrator

Audria Brown
(Signature)

for Manager, Seattle Aircraft Certification Office
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.